UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/332,029	06/14/1999	PETER C. JONES	06502.0269-0	2426

22852   7590   12/18/2002

FINNEGAN, HENDERSON, FARABOW, GARRETT &
DUNNER LLP
1300 I STREET, NW
WASHINGTON, DC 20006

EXAMINER
HO, THE T

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>07 October 2002</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,2,4-7 and 9-13</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1,2,4-7 and 9-13</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is in response to the amendment filed 10/7/2002.

2. Claims 1-2, 4-7 and 9-13 have been examined and are pending in the

application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> (e) the invention was described in a patent granted on an application for patent by another filed in the
> United States before the invention thereof by the applicant for patent, or on an international application
> by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this
> title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) do not apply to the examination of this application as the application

being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

published under 35 U.S.C. 122(b). Therefore, this application is examined under 35

U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-2, 4, 6-9 and 12 are rejected under 35 U.S.C. 102(e) as being

unpatentable by Leach U.S Patent No. 5,805,885.

As to claim 1, Leach teaches generating at runtime (at runtime, lines 22-23

column 11) a class (objects, lines 15 column 11) that implements an interface

(interfaces, line 25 column 11) specified at runtime having a method (202, 205 and

206...Fig. 2); creating an instance (instances are created, lines 21-22 column 11) of the

class; receiving by the class instance a request (an external request is made, line 12 column 22) to process the method (lines 12-15 column 22) of the interface (IPrint interfaces, line 20 column 22); dispatching the request to an object to facilitate processing of the method of the interface (Fig. 7C, requests received by an enclosed object are passed to the enclosing object, line 67 column 22 to line 1 column 23); returning a result of the processed method by the object (implements the QueryInterface method to return pointers to these exposed interfaces when requested, lines 53-56 column 22).

As to claim 2, Leach further teaches generating at runtime (at runtime, lines 22-23 column 11) a class that implements more than one interface (interfaces, line 25 column 11) specified at runtime, each interface having one or more methods (methods of 202, 205 and 206...Fig. 2).

As to claim 4, Leach further teaches specifying an object to process method (determination which interface to retrieve and how to invoke, lines 9-10 column 23) invocations on the instance.

As to the computer product of claim 6, note the discussion of the method of claim 1 above.

As to claims 7 and 9, note the discussions claims 2 and 4 above, respectively.

As to the system of claim 12, note the discussion of the method of claim 1 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

4. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Leach in view of Hailpern U.S Patent No. 6,275,937.

As to claim 5, Leach discloses receiving at runtime an indication (at runtime, lines

22-23 column 11) of at least one interface (interfaces, line 25 column 11) having a

plurality of methods (methods of 202, 205 and 206...Fig. 2); and generating at runtime a

class (objects, lines 15 column 11) that implements the interface (interfaces, line 25

column 11) by generating code for each of the methods (Code Table 3, column 12, 13

and 14). However, Leach does not teach an invocation handler.

Hailpern teaches an invocation handler (Process Execution Handler 4050, Fig. 7)

that executes processes (lines 31-50 column 15). It would have been obvious to apply

the teachings of Hailpern to the system of Leach because this allows dynamic

aggregating objects at runtime as disclosed by Leach (line 48 column 9 to line 4 column

10).

As to the computer product of claim 10, note the discussion of the method of

claim 5 above.

5. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Leach in view of Hailpern and further in view of Hughes U.S Patent No. 6,345,382.

As to the method of claim 11, note the discussions of claims 1-3 and 5 above. However, Leach as modified does not teach proxy class. Hughes teaches instance of proxy class specified at runtime (dynamically specifies at run time an instance of the Proxy class 107, lines 6-8 column 8). It would have been obvious to apply the teachings of Hughes to the system of Leach because this allows dynamic loading of customized behavior for a derived class when source code for its base class is unavailable as disclosed by Hughes (lines 50-53 column 1).

As to the system of claim 13, note the discussions of claims 1, 5 and 11 above. Leach as modified further teaches the use of a memory (memory, line 39 column 11) and a processor (central processing unit, lines 38-39 column 11).

Response to Arguments

6. Applicant's arguments filed have been fully considered but they are not persuasive.

Applicant argued the cited reference does not teach dispatching of a request to an object to facilitate processing of the method (remarks, lines 20-21 page 4). In response, the cited reference clearly teaches the limitation as disclosed in the claim rejection above. Leach discloses dispatching the request to an object to facilitate processing of the method of the interface (Fig. 7C, and requests received by an enclosed object are passed to the enclosing object, line 67 column 22 to line 1 column 23).

Applicant argued the cited reference does not teach returning a result of a processed method (remarks, lines 2-3 page 5). In response, the applicant is arguing limitation that is disclosed in the specification but not claimed before. However, this limitation is still met by the cited reference as disclosed in the claim rejection above.

Applicant argued the cited reference does not teach specifying an object to process method (remarks, lines 13-14 page 5). In response, the cited reference clearly teaches the limitation as disclosed in the claim rejection. Leach teaches "determination which interface to retrieve and how to invoke" (lines 9-10 column 23) and "query function member of the enclosing multitype object is invoked in order to retrieve a reference to the interface that has been aggregated" (lines 42-44 column 10).

Applicant argued the handler of Hailpern reference is not in the same context as the handler as claimed (remarks, lines 14-15 page 7). In response, while this may be true it does not preclude using Hailpern in the claim rejections.

Applicant argued the cited references do not teach generating at runtime a class that implements the interface by generating code for each of the methods included in the interface (remarks, lines 16-18 page 7). In response, the cited reference clearly teaches the limitation as disclosed in the claim rejection above. Leach discloses (in Code table 3 and column 11-14) generating at runtime (at runtime, lines 22-23 column 11) a class (objects, lines 15 column 11) that implements the interface (interfaces, line 25 column 11) by generating code for each of the methods (Code Table 3,define the methods of each interface, lines 27-28 column 14).

Applicant argued that proxy class in Hughes reference is not generated at run-time (remarks, lines 9-10 page 9). In response, the cited reference clearly teaches the limitation as disclosed in the claim rejection above. Hughes teaches dynamically specifies at run time an instance of the Proxy class (lines 6-8 column 8).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to The T. Ho whose telephone number is 703-306-5540. A voice mail service is also available for this number. The examiner can normally be reached on Monday – Thursday, 8:30 am – 6:00 pm, and every other Friday from 8:30 am – 5:00 pm.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 703-305-

3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C 20231

Or fax to:

- AFTER-FINAL faxes must be signed and sent to (703) 746 – 7238

- OFFICAL faxes must be signed and sent to (703) 746 – 7239   .

- NON OFFICAL faxes should not be signed, please send to (703) 746 – 7240

ALVIN OBERLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

t.h
December 16, 2002